

# AN EVALUATION OF PUBLIC OPINION ABOUT CONGESTION PRICING AND TOLLS

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Toll Roads and Congestion Pricing

**AN EVALUATION OF PUBLIC OPINION  
ABOUT CONGESTION PRICING AND TOLLS**

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## **EXECUTIVE SUMMARY**

### **INTRODUCTION AND BACKGROUND**

Various forms of transportation and congestion pricing are being viewed by policy makers and transportation agencies as ways to deal with both congestion and increasingly scarce funding for the transportation system. But the public remains generally uninformed about how pricing systems might operate or how related implementation issues could be addressed. Unsure about the public's reaction, local jurisdictions are reluctant to propose transportation pricing options.

To aid local governments in determining whether congestion pricing would be feasible in the Puget Sound region, this project assessed public attitude toward transportation pricing and explored ways to present information to the public that would increase their understanding.

#### **Transportation Pricing**

Market-based transportation pricing strategies charge for the use or potential use of the transportation system. The three basic market-based categories include the following:

- Vehicle use-based strategies, for example, additional parking charges, VMT charges, and fuel taxes
- Ownership-based strategies, for example, additional purchase taxes or license fees
- Road use-based pricing strategies, as in charging single occupancy vehicles (SOVs) tolls, or additional tolls, on roads or bridges during peak use hours.

Ownership-based and vehicle-use strategies are currently used to raise revenue, and at their present levels, they may to some limited extent reduce SOV use. Greater use of these pricing strategies must be preceded by an improvement in the public's familiarity with them.

Interest in road-based pricing has increased for two reasons. First, road use-based strategies target the root of congestion, the use of facilities during peak hours. Second, these strategies represent a new and potentially substantial revenue source. Of the three strategies, road-based strategies are the least tried, as well as the most controversial, and many policy makers are concerned that implementing them would be difficult.

### **Objectives**

The two primary objectives of this research were (1) to assess public attitudes in the Puget Sound Region toward tolls, congestion pricing, and other forms of market-based transportation pricing (e.g., gas taxes, VMT charges, parking fees) and (2) to explore various ways to present information to the public so that people will feel adequately informed to decide whether to support a pricing system.

A third objective that developed out of early research stages was to measure how the level of acceptance of pricing changes (for or against) as understanding increases.

### **Research Process**

We reviewed the literature on the theory and applications of congestion pricing, focusing on the ways public opinion has been viewed and evaluated, the political impediments that have arisen during implementation, and the methods used to handle these impediments. Comparatively little research has been conducted on public opinion.

We then conducted seven focus groups to identify concerns and issues that a pricing system must address, thirteen interviews with local executives and "opinion leaders" to solicit views on the implementation issues raised in the focus groups and possible strategies for addressing those issues, and five focus groups to review the observations and conclusions of the study. The focus groups also briefly critiqued three potential public education approaches and three possible packages of specific transportation pricing strategies.

Finally, in anticipation of funding for Phase 2, survey question categories were developed for two questionnaires. One is intended for telephone administration and

sampling of up to 2,000 households. The second would be used for eight to ten group surveys, each group involving 30 to 50 people.

## **FOCUS GROUPS**

### **Method and Purpose**

Seven 90-minute, employer-based focus group sessions were held involving 86 people. The three primary purposes for conducting the focus groups in this study were to

- determine participants' qualitative level of understanding about congestion pricing
- identify and clarify issues that might affect both public support for and implementation of a congestion pricing system
- explore effective ways to address the issues and present congestion pricing to the public.

### **Focus Group Conclusions**

Through the focus group process, the researchers reached the following conclusions:

- There was no clear trend of support for or opposition to congestion pricing after people learned more about it.
- The complexity of issues was confusing, and, in some cases, led to diminished support for congestion pricing.

Some issues arose more frequently and created more discussion than others, suggesting their importance to the participants. Below are conclusions regarding these issues:

- Geographical and income equity issues were seen as critical.
- Participants expressed a strong desire to see revenue from congestion pricing be invested in transportation improvements, especially in improvements that would provide an alternative to automobile driving.
- Benefits (e.g., better transit service) from congestion pricing should be implemented simultaneously with the charges.
- The technical aspects of congestion pricing caused concern, especially ways to deal with "spillover" from those who would use alternative routes to avoid road pricing or alternative parking in areas surrounding charge-for-parking locations.

## **EXECUTIVE INTERVIEWS**

### **Method and Purpose**

Thirteen regional "opinion leaders" (elected officials, business leaders, and public managers) were interviewed. The purpose of the executive interviews was to gather input on the issues that might arise in implementing a congestion pricing system and on ways to address these issues.

### **Executive Interview Conclusions**

Through the executive interviews, the researchers reached the following conclusions:

- "Opinion leaders" are generally well-informed about congestion pricing and the related issues.
- The importance of education for the public, as well as for opinion leaders and elected officials, cannot be overstated.

Some topics arose more frequently and created more discussion than others, suggesting their importance to the executives. Below are conclusions regarding these topics:

- Applications would have to be region-wide to avoid unequal impacts, especially in central business districts.
- Equity (income and geographic) and spillover issues would have to be substantively addressed.
- The uses of revenues would be critical to public acceptance.
- The public may not view congestion as bad enough to warrant major changes.
- Involvement by the public in planning the system would help with acceptance.

## **REVIEW FORUMS**

Twenty-nine people drawn from the first five focus groups participated in three forums to review the observations and conclusions of the study. Participants were asked how their views might have changed since the focus groups. They also briefly critiqued three potential approaches for explaining the concept of congestion pricing and for

presenting its advantages and disadvantages and three possible packages of specific transportation pricing strategies.

### **Education Approaches**

The intent of the public education approaches was to inform the public about the issues surrounding congestion and about ways that congestion pricing might address them. Three approaches were developed to emphasize congestion pricing as a way to

- (1) change travel choices through economic incentives
- (2) fund the transportation system
- (3) charge for the full cost of trips.

The travel choice approach addressed congestion but carried a strong tone of "social engineering" and raised a number of equity issues. The funding approach suggested that users should pay for roads and most clearly identified where congestion pricing revenues would go. However, some participants suggested that this was a tax on roads already paid for, while others were concerned that it did not hold government accountable. The full cost approach aimed to educate the public to help them make trip decisions. While this approach linked travel to direct and indirect costs, it suffered from the support of figures that were hard to substantiate and an attitude that these were "somebody else's" costs.

A combined approach would fully describe the problems of congestion and current funding mechanisms, as well as how a congestion pricing system would operate, how it would address both current problems and those it would create, and how the revenues would be used.

### **Congestion Pricing Strategy Packages**

Focus group participants suggested that it would be easier to understand congestion pricing and its effects if they had specific programs to react to. For discussion purposes, three strategy packages were developed, one emphasizing area pricing, in which drivers would pay a fee to enter a ring around a congested area; the second

emphasizing a parking tax; and the third combining a parking tax and electronic tolling on roadways. The total tax burden in each package was about \$5.00 per day.

Review panel participants were concerned that the area pricing approach would not deal with suburb-to-suburb trips and could unfairly affect central business districts such as downtown Seattle. They were concerned that parking pricing approaches could also adversely affect downtown areas, and in addition, that they did not respond to trip length. The last alternative was seen as balanced, but participants were concerned that it would be politically difficult to implement because it would affect so many people.

### **Review Forum Conclusions**

The review forum process led to the following conclusions:

- No single public education emphasis or approach would be sufficient to explain congestion/transportation pricing.
- Whenever numbers are presented, they must be believable and supportable.

Regarding the educational approaches, participants indicated that the travel choice approach was the strongest, seeming to draw the clearest connection between the problem (congestion) and a pricing solution, whereas the full cost approach was the least effective and the most difficult to defend.

One of the most important outcomes of the strategy package review was that participants criticized parking charges for not encouraging short commutes and for potentially placing central business districts at a competitive disadvantage. Review forum participants began to see how parking policy impacts congestion, but this connection was not inherently obvious.

### **QUANTITATIVE RESEARCH FOR PHASE II**

The qualitative research done in Phase 1 set the stage for quantitative analysis that should be conducted in Phase 2. Two types of surveys are anticipated: a telephone public opinion survey and group surveys.

The telephone public opinion survey would be a 15- to 20-minute interview, administered to 1,000 to 2,000 randomly selected participants in the Puget Sound region to gauge understanding and impressions of pricing theory and issues.

The group surveys would be administered in 75- to 90-minute sessions at various sites around the region. They would involve eight to 10 groups of 30 to 60 randomly selected participants each (at least 400 people). Pre- and post-session written questionnaires would be administered to gauge understanding and impressions of pricing theory and issues, as well as of public education emphases and proposed combinations of strategies.

## **CONCLUSIONS AND RECOMMENDATIONS**

Nearly all participants in the study agreed that congestion in the Puget Sound region is bad and getting worse, although most people said they were personally not unacceptably impacted. There was also widespread agreement that we can not "build our way out of congestion." Some people currently avoid congestion by taking alternative routes, shifting their hours of commute, or changing modes. Others suspected that they have progressively adapted to present levels of congestion and do not notice the inconvenience. But traffic trends were troubling to most participants, and this concern about the future appears to be a prime motivating factor for looking at pricing alternatives.

A small percentage of focus group participants felt they understood congestion pricing and the theory behind it. We observed an increase in awareness of congestion pricing as the study progressed, possibly because of media coverage of the "New Partners: Public-Private Initiatives in Transportation Program." However, participants generally viewed congestion pricing in terms of the context of today's transportation situation, and it may be challenging for the general public to make long-term link between congestion pricing, mode shifts, and changes in land use.



The many interviews and focus groups we conducted suggested that public opinion about tolls and congestion pricing cannot be neatly packaged and predicted. Timing is critical, as is the context in which information is presented. Given the participants' emphasis and our own observations, we believe that the following are the most important conclusions about public opinion from the study:

1. Pricing programs must ensure a reasonable level of mobility by providing good alternatives to SOVs.
2. Pricing must be applied region-wide if it is to be effective and to have any chance of addressing geographic equity issues.
3. How the revenues are used will be critical to public acceptance.
4. There must be well considered ways to deal with traffic and parking spillover.
5. Income equity issues must be addressed.
6. Members of the public must believe that transportation pricing will reduce congestion if they are to support it.
7. The public must have a high level of confidence in the technology.

## **I. INTRODUCTION, BACKGROUND, AND RESEARCH OVERVIEW**

Various forms of transportation and congestion pricing are being viewed by policy makers and transportation agencies as ways to deal with both congestion and increasingly scarce funding for the transportation system. But the public remains generally uninformed about how pricing systems might operate or how related implementation issues could be addressed. Unsure about the public's reaction, local jurisdictions are reluctant to propose transportation pricing options.

To aid local governments in determining whether congestion pricing would be feasible in the Puget Sound region, this project assessed public attitude toward transportation pricing and explored ways to present information to the public that would increase their understanding.

### **TRANSPORTATION PRICING**

Market-based transportation pricing strategies charge for the use or potential use of the transportation system. The three basic market-based categories include the following:

- Vehicle use-based strategies, for example, additional parking charges, VMT charges, and fuel taxes
- Ownership-based strategies, for example, additional purchase taxes or license fees
- Road use-based pricing strategies, as in charging single occupancy vehicles (SOVs) tolls, or additional tolls, on roads or bridges during peak use hours.

Ownership-based and vehicle-use strategies are currently used to raise revenue, and at their present levels, they may to some limited extent reduce SOV use. Greater use of these pricing strategies must be preceded by an improvement in the public's familiarity with them.

Interest in road-based pricing has increased for two reasons. First, road use-based strategies target the root of congestion, the use of facilities during peak hours. Second,

these strategies represent a new and potentially substantial revenue source. Of the three strategies, road-based strategies are the least tried, as well as the most controversial, and many policy makers are concerned that implementing them would be difficult.

## **TRANSPORTATION PRICING DEMONSTRATION PROJECTS**

Currently, no large-scale, road-based pricing projects are operating in the U. S. However, the Federal Highway Administration (FHWA) was authorized under the 1991 Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) legislation to fund five congestion pricing demonstration projects. To date, only one actual demonstration, on San Francisco's Bay Bridge, has been funded. Two criteria for federal funding are (1) that projects be innovative and (2) that they fit into a region's comprehensive transportation plan. The legislation intended that road-based strategies, perhaps combined with vehicle-use strategies, will be included in the funded demonstration projects.

The Puget Sound Regional Council (PSRC) is investigating the feasibility of a demonstration project in our region. With the assistance of consultants, ad hoc technical committees, the results of this study, and substantial public input, the PSRC will select the most promising alternative or a combination of alternatives. If, at the end of this process, congestion pricing in the region appears feasible, the PSRC, in conjunction with the Washington State Department of Transportation, will spearhead an effort to secure ISTEA funding.

## **PROJECT OVERVIEW**

### **Objectives**

The two primary objectives of this research were (1) to assess public attitudes in the Puget Sound Region toward tolls, congestion pricing, and other forms of market-based transportation pricing (e.g., gas taxes, VMT charges, parking fees) and (2) to

explore various ways to present information to the public so that people will feel adequately informed to decide whether to support a pricing system.

A third objective that developed out of early research stages was to measure how the level of acceptance of pricing changes (for or against) as understanding increases. Given the controversial nature of congestion pricing, public acceptance will be vital to any implementation plan. Thus, this measurement of change in the level of acceptance could be important in attracting funding for a demonstration project.

## **Research Process**

### **Literature Review**

We reviewed the literature on the theory and applications of congestion pricing. We focused on the ways public opinion has been viewed and evaluated, the political impediments that have arisen during implementation, and the methods used to handle these impediments. We discovered that comparatively little research has been conducted on public opinion.

### **Focus Groups**

Seven 90-minute, employer-based focus group sessions were held involving 86 people (eight to 15 in each group). These sessions helped to identify concerns and issues that a pricing system must address. Participants also offered a number of innovative suggestions and solutions.

### **Executive Interviews**

Thirteen regional "opinion leaders" (elected officials, business leaders, and public managers) were interviewed. Their views were solicited on the implementation issues raised in the focus groups and possible strategies for addressing those issues.

### **Review Forums**

Twenty-nine people drawn from the first five focus groups participated in three forums to review the observations and conclusions of the study. Participants were asked how their views might have changed since the focus groups. They also briefly critiqued

three potential public education approaches and three possible packages of specific transportation pricing strategies.

We developed three approaches for introducing and explaining transportation pricing for the participants to review. These alternatively emphasized congestion pricing as a way to (1) change travel choices, or use patterns, as businesses do with peak/off-peak pricing for long-distance phone service, movies, and air-travel; (2) fund transportation system enhancements (e.g., roads, HOV, transit); and (3) charge for the full cost of trips, including social and environmental costs.

We also designed three strategy packages comprising combinations of gas tax, area-wide pricing, road tolls, and parking charges to give participants specific approaches to react to. Each package would cost a commuter \$5.00 per day for a 20-mile round trip.

### **Public Opinion Questionnaires**

In anticipation of funding for Phase 2, survey question categories were developed for two questionnaires. One is intended for telephone administration and sampling of up to 2,000 households. The second would be used for eight to ten group surveys, each group involving 30 to 50 people.

### **REPORT ORGANIZATION**

Chapter two of this report discusses the researchers' literature search, including the reasons for renewed interest in congestion pricing, congestion pricing strategies for study in the Puget Sound, national and international experience with congestion pricing, public opinion, and public education. The following chapters present the procedures and findings of the focus groups, executive interviews, and review forums. The final chapters present recommendations for Phase II research and the study's conclusions.

## **II. LITERATURE REVIEW**

Congestion pricing is a transportation demand (TDM) approach that aims to make better use of existing highway capacity. Tolls have historically been justified as a means to, first, fund new facilities and, second, optimize their use. Congestion pricing charges reverse these emphases (Elliott, 1992).

Congestion pricing is meant to encourage peak-period road users to (1) shift to off-peak use, (2) shift to transit or other high occupancy vehicles (HOV), (3) change their destinations, and/or (4) forego trips. It can achieve these objectives by rationing capacity, but as Small (1993) has observed, the rationing mechanism is dollars instead of delay. Whereas other congestion-reducing strategies, such as HOV lanes and more roads, only offer short-term relief, congestion pricing promises to contain latent demand in the long-term (Bhatt, 1993).

### **REASONS FOR RENEWED INTEREST IN CONGESTION PRICING**

#### **Increasing Congestion**

Downs (1992) has identified five indirect, long-term trends that are contributing to the growth in congestion: (1) commute distances are becoming longer; (2) preference for single occupancy vehicles is increasing as cars become more comfortable; (3) development of low density housing is continuing; (4) development of low density employment sites with parking is continuing; and (5) 60 percent of travel is outside of peak hours. In fact, while congestion was originally perceived as a product of the work commute and as a problem found mostly in corridors serving central business districts (CBD), much of the worst growth in congestion has been the result of non-work trips (Koltnow, 1993).

In 1990 in the Puget Sound region, travelers experienced an estimated 150,000 hours of delay per day during the evening peak period on the arterial/freeway network

alone. Given present trends, that number is projected to increase to 660,000 hours per day by 2020 (PSRC, 1994).

### **The Potential for New Revenue**

Congestion pricing is viewed by some planners as a particularly attractive revenue source, politically, as in theory it would meet infrastructure needs by reducing the demand for highway capacity (Small, 1993). The problem, as Patrick DeCorla-Souza projected, is that just maintaining the current level of highway service will require twice the available funding. DeCorla-Souza suggested that congestion pricing would provide enough revenues to finance both existing and new transportation services (DeCorla-Souza, 1993).

### **Air Pollution, Energy, and Growth Management Mandates**

Environmentalists see congestion pricing as a way to curb the growth in vehicle miles traveled and emissions. For example, analysts have estimated that congestion pricing could reduce the emission of smog precursors in Southern California by 8 percent (Cameron, 1993) and reduce hydrocarbon emissions by 15 percent during peak hours and by 3.6 percent daily (DeCorla-Souza, 1993). In addition, congestion pricing may reduce energy use through more efficient movement (WSTC, 1994). Congestion pricing is also viewed as a tool for encouraging more compact land use (FHWA, 1992).

### **New Technologies.**

A major objection to congestion pricing has been that manual toll collection would slow traffic and add to congestion. New technology, which has already been field tested, allows road use charges to be collected without slowing traffic. Furthermore, electronic toll collection is cheaper than manual methods. In fact, the cost of operating an electronic system has been estimated to be less than 5 percent of the revenues that would be collected (TRB, TPR, 1994).

## **CONGESTION PRICING STRATEGIES FOR STUDY IN THE PUGET SOUND REGION**

The Puget Sound Regional Council has identified four broad congestion pricing strategies that might be useful in the region. These are described below.

Some feel that the key to a comprehensive system is linkage. For example, they believe that parking charges, congestion pricing tolls, and transit availability must be linked. If they are not, people will not be discouraged from using single travel modes (DeCorla-Souza, 1993).

Whatever the final mix of strategies, the overall goals should be to (1) reduce the duration of maximum congestion, (2) reduce the average commute time, (3) increase the average commute speed, (4) offer commuting during most convenient times, and (5) reduce commuter frustration (Downs, 1992).

### **Road Pricing**

There are three general ways to apply road pricing:

- facility pricing charges for using a specific road, a set of roads in a corridor, or a bridge
- cordon pricing charges for entry into an area either to drive or park
- regional network pricing charges for roads and facilities going in more than one direction (e.g., north-south and east-west), which usually affects a larger area than do facility or cordon pricing (WSTC, 1994)

To implement road pricing, jurisdictions must address factors such as traffic mix, flexibility, responsiveness to demand, and reliability (Hau, 1992). They must also ensure that congestion pricing addresses not only the congested CBD commute, but also cross-suburban commutes and non-work trips, which have become an increasingly large cause of congestion (FHWA, 1992).



### **A Vehicle Miles Traveled (VMT) Charge**

A VMT charge is not a strict form of congestion pricing. The infrequency of payment works against this strategy. However, a reason to favor VMT charges is that the collection system could be easily implemented.

### **Parking Fees**

Nationally, 90 percent of commuters do not pay for parking. In downtown Seattle, about one-third do not. To subsidize this free parking, society pays more than \$30 billion a year. Thus charging for parking is attractive to policy makers. However, many believe that eliminating the free parking benefit would be very difficult (TRB, TPF, 1994). Free parking has come to be perceived by the public as a right, and employers are very concerned about employee dissatisfaction with changes in parking policy and labor relations (Ulberg, 1993).

Shoup (1993) pointed out that while the consideration of providing free gas would cause public outcry over the environmental consequences, the results of free parking, which is not seriously contested, are worse. For example, it is estimated that, because of free parking, VMT in Los Angeles is 33 percent worse than it would otherwise be if market rates prevailed. As a remedy, Shoup suggested raising parking prices and offering employees who receive employer-paid parking the option of cash or a transit subsidy instead of parking. He predicted that this approach would strengthen the central business district (CBD), as the higher cost of parking in the CBD would encourage workers to choose to receive cash that they could use to pay for other modes, freeing space in the CBD for tourists and shoppers (Shoup, 1993).

### **Fuel Taxes**

As with VMT charges, there is little in the literature to suggest that fuel taxes should be considered a form of congestion pricing. While fuel taxes may have an effect on total VMT and thus congestion, they do not attack the problem directly. Thus the public may have a hard time seeing the connection between the two.

## **EXPERIENCE WITH CONGESTION PRICING**

### **National Experience**

In spite of models predicting large benefits from congestion pricing, the Urban Mass Transit Administration (UMTA) was unable to attract proposals for demonstration projects in the 1970s. Public support was not nurtured, and interest groups emerged to oppose both the concept and specific projects (Arrillaga, 1993). Some researchers suggested that the public's perception of congestion was that it is not bad enough to warrant road pricing. Others cited unanswered questions related to congestion pricing, including income and geographical equity concerns, "freedom of the road" issues, legal and enforcement uncertainties, and concerns about possible adverse business effects (WSTC, 1994). Following these problems, little thought was given to congestion pricing in the 1980s (Arrillaga, 1993).

### **San Francisco**

San Francisco was awarded ISTEA funding for a congestion pricing demonstration project on the Bay Bridge. Dittmar et. al., (1994) suggested four reasons that the Bay Bridge is well suited for funding:

- There are reasonable alternatives to SOV travel.
- Congestion is high in peak periods.
- Toll facilities are already in place.
- There are no reasonable parallel facilities.

The Metropolitan Transportation Commission (MTC) is presently assessing public reaction to congestion pricing and the proposed Bay Bridge project. Participants in focus groups revealed that

- they are skeptical that government can effectively spend the revenues
- they want to see a list of alternatives at the beginning of the project

- equity is more of a surface issue than a core one, although some people were deeply concerned about income equity issues and might find this a definitive argument against congestion pricing
- monitoring, evaluation, and administrative functions were not their top concerns for a system (MTC, 1994).

Perhaps most interestingly, the researchers found that after people had attended the focus groups and learned more about congestion pricing, there was a net change in support for it. However, more people than before were also uncertain about it. On the basis of the focus group input, the MTC tentatively concluded that public education and information are important and should be funded at a modest level (MTC, 1994).

### **Los Angeles**

A toll road on Route 91 is scheduled to open in 1996 to link Riverside and Orange County. A private corporation is authorized to operate four lanes on the freeway median for 35 years. Any car with one or two passengers will pay. Fees will be increased to keep congestion in check. The California Department of Transportation had planned for HOV lanes but did not have the funding.

### **San Diego**

In 1992, the San Diego Association of Governments won an ISTEA grant to "retro-toll" eight miles of Interstate HOV lanes during peak hours. Some of the revenues will help fund transit, including an extension of light rail. This plan was driven by a concern that support for the HOV system, used at only 50 percent of capacity during peak hours, was eroding (Plous, 1994).

## **International Experience**

### **Singapore**

In 1975, Singapore initiated the first large-scale application of congestion pricing, a CBD cordon. The impact was immediate: a reduction in peak traffic of 44 percent and a rise in average speeds of 20 percent (May, 1993). A number of reasons have been cited

for the success. First, travel alternatives were available, particularly rail, which serviced 560,000 people daily (May, 1993). Second, development was dense, as 84 percent of the people living in planned, high-rise flats. Third, congestion outside the cordon was worse than inside, thus limiting options to take other routes. Fourth, hitchhiking, a well-accepted practice in Singapore, expanded because HOVs were exempt from tolls and buoyed congestion pricing. Fifth, the government system allowed centralized decisions (Menon, 1993). Sixth, the downtown area was so densely arranged that the pricing area was only 2.8 square miles, requiring fewer entry points than would be needed in most U.S. cities (Urban Mobility Corporation, 1994).

### **Hong Kong**

In 1985, high hopes for a system were doused because of the city's unique political agenda (promotion of democratic programs in light of the pending transfer to China in 1997), tactical errors (public officials were not used to selling ideas and were unprepared to handle the negative public reaction), the perception that it would limit choice, and concerns that electronic technology was not in place and that manual toll stations would cause even greater delays (Borins, 1988).

### **Europe**

Moderate success has been seen in Oslo and Trondheim, Norway. Researchers have warned that other influences, such as new roads, growth, more transit service, and Norway's traditional use of tolls to fund new roads, should be considered in analyzing Norway's results (May, 1993).

While congestion pricing has not been implemented in England, in 1991 a \$5 million, three-year project was begun in London to study the technical aspects of congestion pricing and the effects of public opinion. British planners feel that if a plan is not well packaged, public resistance will overwhelm any proposal (FHWA, 1992).

## **PUBLIC OPINION**

### **The Role of Public Opinion in Determining Political Feasibility**

The economic theory of congestion pricing has been discussed in the literature for many years. Yet practical applications have been slow to follow. A primary reason for this is policy makers' and elected officials' warranted concerns that the public will not accept congestion pricing. As Martin Richards, Chairman of England's MVA Consultancy, suggests, "The failure to recognize the importance of public response [to congestion pricing] and to make full allowance for that response is bound to lead to failure of any project" (FHWA, 1992).

The implementation of congestion pricing will require the approval of political institutions at various levels of government, and public opinion will be pivotal to that approval. One reason is that, within our democratic system, opponents can stymie a program at any one level of government, whereas proponents must win at all levels (TRB, TPF, 1994). Another challenge is that opponents may have greater incentives and abilities to resist change to the system than proponents may have to create change. For example, Charles Lave attempted to model the intensity of public anger that might arise from a congestion pricing system. He predicted that even if total consumer surplus rose as a result of congestion pricing, strong reaction by the most unwilling drivers would severely cripple chances of success (Lave, 1994).

More specifically to transportation, any policy that seeks to restrain automobile use has an inherent political liability because people will not see immediate and substantial direct benefits from the change (Dittmar et. al., 1994). Therefore, the burden will be on proponents of congestion pricing to gain approval by explaining the probable benefits clearly and simply (Rom, 1994).

### **Current Public Opinion**

An attitude survey in the United Kingdom revealed that while 95 percent of people saw congestion as a problem, only a minority supported road pricing. The level of

support increased when revenues were targeted for transit. In fact, the study revealed that politicians perceive the public to be more pro-car than it actually is. However, the study also found that increases in gas prices were not popular (Jones, 1993).

A national U.S. survey concluded that two-thirds of those who experience congestion would pay to avoid it. That study indicated that 40 percent would pay \$2.00 per day, and 20 percent would pay \$5.00 per day (TRB, TPF, 1994).

Fielding is conducting a five-year behavioral study in California involving five toll projects expected to be on-line by 1996 (Fielding, 1993). He is studying travel response to pricing and price elasticity, the value of time for various groups, the level at which drivers transfer to rideshare, and users' and non-users' opinions of the environmental consequences of highway use.

### **Factors that Influence Public Opinion**

Richards proposed that, although people do not want congestion pricing, they will pay if they (1) understand the damage caused by congestion, (2) view congestion pricing as a way to reduce the damage, (3) support the ways the generated revenue will be used, and (4) view congestion pricing as part of a comprehensive transportation plan (FHWA, 1992).

Below are some of the specific factors discussed in the literature that may affect public opinion.

### **Environmental Impacts**

Objections about environmental impacts would rise if tolls were used to build infrastructure. So environmental impact statements would have to show how much of the revenue would be applied to roads (Cameron, 1993). Although environmentalists might support congestion pricing as a way to curb emission, it is not the best way to address air quality, as peak-hour improvements in air quality would be largely offset by off-peak decreases (Small, 1993).

## Equity

In transportation, "equity" issues involve all distributional differences, including monetary, geographic, and temporal disparities. They may arise within (as opposed to strictly between) population groups, for instance between commuters with and without household responsibilities (Giuliano, 1994), and they may have gender implications (Bhatt, 1993). Because of these issues, the ways in which costs and benefits were distributed would likely prove more important to people's views of congestion pricing than the total net benefit (Rom, 1994).

Analysts disagree on who congestion pricing might impact and how. Opponents of congestion pricing state that it is regressive. Proponents argue that it is no more regressive than utility charges (Elliot, 1992). Some even say that equity issues are more likely to be components of an interest group's political strategy than a genuine concern (TRB, TPF, 1994). Others point out that the current system is also regressive: as a group, low income drivers travel more in off-peak hours (Elliot, 1992), in effect, subsidizing more wealthy, peak-hour drivers.

People and groups who might be negatively affected by congestion pricing include the following:

- people with a low time value who would have to pay if alternatives were lacking; this loss could be eased through the use of vouchers (FHWA, 1992)
- people who would shift to less convenient modes or forego trips, and some commercial users (TRB, TPF, 1994)
- neighborhoods absorbing spillover, businesses within the congestion pricing zone, and users of unpriced facilities that became congested (Bhatt, 1993)
- the road construction industry (Starkie, 1986)
- some individuals, as there is variation in individual perceptions about equity; those with the least flexibility would be the hardest hit (Giuliano, 1994)
- people who relocated to avoid paying congestion pricing fees (FHWA, 1992).

If those most negatively affected came from low- and middle-income working households, they would constitute a significant segment of the voting public (Giuliano, 1994).

People and groups who might benefit from congestion pricing include the following:

- people with a high time value, people already using the bus or HOV lanes, and people residing or working in air pollution zones (Bhatt, 1993)
- most commercial users, who would be able to move goods more quickly, as well as toll revenue recipients (direct or indirect) (TRB, TPF, 1994)
- hitchhikers (Menon, 1993)
- high income groups (Giuliano, 1994).

Some analysts believe that all income groups (but not all individuals) could win with appropriate distribution of revenues (TRB, ES, 1994), unless initial congestion were low (Giuliano, 1994). Others, such as Timothy Hau, disagree, arguing that congestion pricing cannot be successful because, on average, it would hurt road users in absence of compensation (FHWA, 1992). Still others believe that circumstances would determine the negative impacts on any individual, and the effects congestion pricing may thus be seen as arbitrary (Giuliano, 1994).

The key to resolving equity issues would lie in the provision of viable, visible, and well-publicized alternative modes for displaced people (Arrillaga, 1993), that is, in successfully mitigating the impacts on those who would be negatively affected. Conducting differential impact studies for all methods considered would help ensure such mitigation (Bhatt, 1993).

### **Government Control**

Some have argued that regulatory congestion pricing strategies might be more politically acceptable than market methods because they are more equitable and easier to implement. But others have pointed out that any transportation demand management measure might be viewed as regulatory under government authority (FHWA, 1992).



For any government-run congestion pricing program to work, the institutions responsible for the program would have to have goals to meet, proper authority, sufficient administrative capacity, autonomy, and accountability. Poor administration of a congestion pricing program would reflect poorly on the program itself, negatively affecting public opinion (Rom, 1994).

### **Political Focus and Approach**

Congestion pricing would impact the social goals of interest groups. For example, environmentalists view congestion pricing as a means to deal with air pollution. Conservative groups see it as a governmental infringement on rights. For politicians to support congestion pricing, interest groups would have to show support—politicians would not do it on their own (TRB, TPF, 1994). Three types of approaches are possible in addressing group interests (Rom, 1994):

1. Narrow strategies would minimize opposition by minimizing negative effects. An example is a program that did not reduce VMT and showed no net increase in government revenues. Of course, the program would also lack positive effects.
2. Broad strategies would maximize some positive impacts for some groups, which might lead to the formation of supporting coalitions to offset opposition from groups that experienced negative impacts.
3. Transformational strategies would seek common ground among groups. The objective would be to find common interests among hostile groups. This approach would require all groups to change their views.

The politics of congestion pricing are complicated by tensions among cities and between inner and outer suburbs (Dittmar et. al., 1994). In general, too little attention is perhaps being given to political and institutional issues in assessing public acceptance (FHWA, 1992).

### **Privacy**

Automatic vehicle identification (AVI) is a technology that would likely be used for automatic toll collection or other congestion pricing strategies. However, some people believe that the use of AVI would threaten their privacy. In fact, the issue of privacy is the primary reason that the U.S. Department of Transportation has not used an

electronic database and AVI system to track speeders (Downs, 1993). However, some have suggested that AVI is no more an invasion of privacy than are credit cards (Elliott, 1992). In addition, pre-paid charge methods avoid the issue altogether.

### **Spillover**

Traffic and parking spillover would impact routes and neighborhoods adjacent to areas in which fees were collected for driving or parking as people tried to avoid the higher-cost areas. This spillover might negatively affect public opinion. Traffic spillover onto adjacent routes could be minimized by using an area-wide pricing system, neighborhood noise abatement, security, and traffic calming (FHWA, 1992).

### **Technology**

Although knowledge of international experience might help the U.S. public accept congestion pricing technologies, people might still resist electronic tolling on grounds of aesthetics and cost, as well as privacy (Polak and Melan, 1992).

### **Toll Collection and Revenue Use**

For the public to accept tolls, they would have to be high enough to affect demand and produce positive visible results, but not so high (or charged outside of the peak period) that they would cause greater than anticipated spillover and thus limit revenue (Small, 1993). To maximize their effectiveness, toll charges should be a function of the level of acceptable congestion and average desired speed (Downs, 1993).

Explanations about the use of revenues would be critical in gaining public acceptance, particularly as many people may perceive that existing roads have already been paid for (Jonas, 1993). Ultimately, the use of revenues would be determined by political bargaining (TRB, TPF, 1994).

## **INTRODUCING CONGESTION PRICING**

### **Gaining Public Acceptance**

Generally, road users perceive that they would be negatively affected by congestion pricing, and this perception would have to be overcome (Starkie, 1986).

Acceptance of congestion pricing could be achieved through public education, as long as people were informed to understand the negative impacts of congestion and its demand on transportation system capacity (Jonas, 1993).

Before introducing a congestion pricing scheme, jurisdictions would have to assess driver sensitivity to different levels of charging (Polak and Jones, 1991). They would also have to understand regional values and the jurisdiction's level of willingness to engage in a public education campaign that reflected those values (Dittmar et al., 1994).

Support would be more likely if congestion pricing (1) were part of a comprehensive plan that emphasized mobility improvement and (2) were developed at a local level (FHWA, 1992). In addition, a congestion pricing program might have to include aspects of "social engineering" to mitigate negative impacts (FHWA, 1992). Most likely, a mixture of applications would be needed (TRB, TPF, 1994).

Innovative types of programs would help gain public acceptance. Several suggestions from the literature are (1) issuing free and rebatable (if transit or carpool were used) smart cards to commuters (DeCorla-Souza, 1993), (2) "cashing-out" for employer-paid parking policies (Shoup, 1993), and (3) using paratransit (e.g., jitneys) in areas where transit was not feasible (FHWA, 1992). Private-sector initiatives could also help introduce congestion pricing; however, the public would have to be convinced that government could manage the system (TRB, ES, 1994).

Whatever approaches were chosen, an incremental program might work best because building coalitions and educating the public would take time (TRB, ES, 1994). Timing would be critical; imposing the costs first and displaying the benefits later would virtually ensure political defeat (Rom, 1994). Thus the evaluation of early, demonstration projects would be crucial. It would provide valuable lessons on both public acceptance and implementation problems (Small, 1993), providing a chance for jurisdictions to gather support for more programs and improve the system (TRB, ES, 1994).

Small (1993) believes that, while congestion pricing might require a big push at first, once the public got used to it and saw it working, its use would spread quickly.

### **Three Types of Program Emphasis**

The researchers grouped information about designing congestion pricing and public education programs into three general approaches.

1. Congestion Pricing as a Means to Change Travel Choices. This approach emphasizes reducing demand through parking controls, ridesharing, increased transit service, Commute Trip Reduction Act, telecommuting, and land-use changes. A shift in trip behavior might result in changes in the nature of transportation services (Small, 1993).
2. Congestion Pricing as a Mechanism to Fund the Transportation System. This approach explains projected shortfalls in funding. To strengthen the argument, revenues should be returned to the geographic area from which they were raised (TRB, ES, 1994). An awareness of the cost of the transportation system might also accelerate alternatives such as telecommuting and remote work sites (Giuliano, 1994).
3. Congestion Pricing as Full Cost Pricing. A pricing mechanism that covered all costs of traveling, including indirect social costs, would lead people to very different choices than those the present system encourages. This approach emphasizes that the transportation system would be funded according to users' "willingness to pay" for the service (TRB, TPF, 1994).

### **SUMMARY**

Interest in congestion pricing is developing because of increasingly difficult congestion problems; the potential for congestion pricing to produce revenue; the potential for congestion pricing to decrease air pollution, decrease energy use, and encourage compact land use; and the availability of new technologies.

The Puget Sound region has identified four broad congestion pricing strategies that might be useful in the region. Charges on vehicle miles traveled and fuel taxes are not strictly forms of congestion pricing. Road pricing, the classic form of congestion pricing, may be applied in three ways: facility pricing charges for use of a specific road, cordon pricing charges for entry into an area, and regional network pricing charges. While charging for parking would certainly help decrease the public subsidy for parking, it is also controversial.

National and international experience with congestion pricing is limited and not necessarily applicable to the Puget Sound area. The most useful study may be the Bay Bridge demonstration project, funded by ISTEA in San Francisco. This study has recently concluded that public education and information about congestion pricing are important and require funding.

Public acceptance of congestion pricing will be crucial to its successful implementation. Few studies have investigated public opinion on congestion pricing, and their results are not clear. Factors mentioned in the literature that may influence public opinion include the environmental impacts of congestion pricing, equity issues, government control, political focus and approach, privacy issues, spillover that might result from congestion pricing, the technology used in implementing it, and toll collection and revenue use.

In introducing congestion pricing, jurisdictions will have to educate the public about both the negative effects of congestion and the positive impacts of congestion pricing. Suggested strategies that may help in gaining public acceptance include

- carefully assessing local sensitivities to charges
- incorporating congestion pricing in a comprehensive plan that emphasizes mobility improvement and includes a mixture of applications
- implementing innovative programs and private sector initiatives
- introducing the approaches incrementally to allow time for coalition building and education
- starting with carefully chosen demonstration projects.

Information on the design of congestion pricing and public education programs can be grouped into three general approaches: congestion pricing as a means to change travel choices, as a mechanism to fund the transportation system, and as full cost pricing.

### III. FOCUS GROUPS

#### **PURPOSE AND METHOD**

The three primary purposes for conducting the focus groups in this study were to

- determine participants' qualitative level of understanding about congestion pricing
- identify and clarify issues that might affect both public support for and implementation of a congestion pricing system
- explore effective ways to address the issues and present congestion pricing to the public.

Employer-based sessions were held at the following seven businesses and organizations during work hours:

<b><u>Organization</u></b>	<b><u>Date</u></b>	<b><u>Time</u></b>
1. University of Washington	March 1, 1994	11:30 a.m.
2. King County	March 15	11:30 a.m.
3. City of Bellevue	March 16	2:30 p.m.
4. The Seattle Times	March 31	8:00 a.m.
5. Fred Hutchinson Cancer Research Center	April 7	4:00 p.m.
6. City of Auburn	October 18	8:00 a.m.
7. Precor Corporation	October 20	11:30 a.m.

The first five focus groups included participants who had relatively good access to transit. Nearly 40 percent used public transit to get to work. To ensure that concerns from those not well served by transit were heard, the study was extended to include suburban focus groups in Auburn and Bothell. Most concerns were raised in both types of groups, indicating that participants viewed transportation issues in a regional context. The most notable difference was that the suburban groups saw the lack of SOV alternatives, particularly transit, as the key drawback to implementation of congestion

pricing. None of the suburban participants were commuting by transit, although 40 percent indicated that transit would be their preferred mode if good service were available. Other characteristics of the focus groups are as follows:

- Participants in six of the groups were self selected. At Precor, employees from a representative range were asked to participate.
- The 86 participants were regular commuters. In total, about half drove SOVs to work, while 84 percent of the suburban participants drove SOVs.
- About one-third of the downtown participants and half of the suburban participants adjusted their commute time to avoid congestion. Overall, about 60 percent had some flexibility (i.e., more than 30 minutes) in their work schedule.
- 86 percent viewed congestion in the region as a "serious problem" that needed attention.
- When asked to identify the two top causes of congestion, 71 percent of the participants cited single occupancy vehicles, 52 percent urban sprawl, 37 percent high population growth, 25 percent too little highway capacity, and 9 percent free parking. In comparison to the downtown groups, the suburban participants viewed SOVs as less of a problem, and sprawl and too little capacity as more important causes.
- Only 8 percent said they were "familiar" with congestion pricing before the focus groups. More of the suburban participants were familiar with congestion pricing, perhaps because of media coverage on the public-private initiatives presented to the Transportation Commission in August 1993.

Because the researchers administered surveys before and after the focus group meetings, the potential for people to accept congestion pricing alternatives can be assessed to some degree. However, note that because of non-random selection and small sample size, the percentages cited do not reflect statistically based attributes of the regional population.

### **THE EFFECTS OF FOCUS GROUP PARTICIPATION ON MEMBERS' ATTITUDES**

After the focus groups, 40 percent of the participants supported a trial of congestion pricing, while 60 percent did not. (The suburban split alone was 30 percent Yes to 70 percent No). About 35 percent said their decision had been "favorably influenced" by what they had learned; about 40 percent said they had been "unfavorably

influenced;" and the rest reported not having been influenced. We observed that people respond differently to new information about congestion pricing. Some may feel overwhelmed by the complexity of the issues; some may react to specific concerns that affect them.

## **PARTICIPANTS' CONCERNS AND SUGGESTIONS**

Focus group participants expressed many specific concerns about congestion pricing and made observations that would be useful in designing congestion pricing alternatives or preparing a public education program.

### **Concerns**

#### **Effectiveness**

- For congestion pricing to influence driving behavior, the tolls would have to be pretty substantial. Do we really know that higher prices to drive would affect congestion? During the oil crises, people still drove.
- Congestion pricing is not designed to reduce the total number of trips and VMT. Congestion pricing does not necessarily charge for the length of trip (e.g., with a toll ring or parking charges).

#### **Equity**

Equity issues came up repeatedly and were seen as critical.

- Those least able to pay for congestion pricing would be the most affected.
- Children could be negatively impacted by congestion pricing, and possibly further isolated in their neighborhoods. Cross-town travel for music lessons and sports practices would be discouraged.
- Some people's jobs (e.g., sales and on-site service) require them to drive, and congestion pricing would negatively impact them more than people who could choose transit.
- A VMT charge would include out-of-state vacation trips. That seems unfair.
- There is a stigma about taking the bus. An increase in the gas tax would increase the price of all trips, pushing even more low income people onto the bus and reinforcing the stigma.

#### **Government Control**

- Congestion pricing would add another layer of bureaucracy that would interfere with the free flow of markets.



- Who has the authority to implement congestion pricing?
- Toll rings around suburban areas would add a "big brother" element to driving.

### **Public Acceptance**

- Congestion pricing will not be an easy public "sell."
- People have become used to congestion. It will have to get worse before there will be a public mandate for congestion pricing.
- Congestion is a relative problem. In comparison to Los Angeles and some other big cities, Seattle's congestion is not bad. The worst thing about congestion is not moving. Even at 20 mph, it is bearable.
- A slow phase-in of congestion pricing could mean meager evidence of benefits, thereby jeopardizing support for subsequent projects.

### **Spillover**

- There would be spillover onto residential streets parallel to toll roads.

### **Technology**

- If we relied on technology and it failed, the system would simply stop.

### **Toll Collection**

- Participants were intrigued by electronic toll options, although they were concerned about the difficulties that might be encountered in installing a system and in maintaining it.

## **Suggestions**

### **Public Education**

- Emphasize how congestion pricing will reduce driver frustration by reducing congestion.
- The benefits of a more efficient transportation system, such as better movement of goods, should be stressed.
- Public presentations (written and oral) about congestion pricing should be specific, such as which roads would be tolled, when, how, and the expected effects.
- Be very clear about the objectives. Is it to reduce congestion? Raise funds? Reduce environmental impacts?
- Rather than avoiding it, a public "vote" (whether advisory or statutory) may be the best way to hold a public forum on congestion pricing.

### **Public Acceptance**

- Use revenues to provide more transit service (a nearly universal opinion).
- Package congestion pricing as a transportation improvement plan rather than a taxing scheme. And make sure that multiple options are available (trains, buses, HOV).
- Alleviate equity concerns by building some free trips into the system.
- If "taxes" are going to be raised through congestion pricing, acceptance will be easier if other taxes are reduced.
- It would not be such a shock to introduce congestion pricing as a parking charge. People are used to paying for parking.
- Be certain to get feedback from non-commuters (e.g., retired, unemployed, and non-working), since congestion pricing is aimed to price those groups' "unnecessary trips" off the road.

### **Design Elements for Efficiency and Effectiveness**

- Participants, particularly those in the suburban groups, stressed the importance of having SOV alternatives in advance of implementation. Strong support for a rail system was voiced at both suburban focus groups.
- For transit to be effective, suburban hubs must service suburban routes and destinations.
- Charge SOVs to use HOV lanes, as proposed by one public-private initiative.
- Parking disincentives should support other system elements. For example, encourage transit/carpooling by issuing stickers for free or low-cost parking one day a week and charge high rates otherwise.
- Establish a progressive toll system—the more a driver used it, the more per time it would cost.
- Build flexibility into the system to provide for some "necessary" trips.

Finally, one participant commented, "Just do it! The issues surrounding congestion pricing will never go away. Decide to go ahead; see what happens. Take a risk!"

## **FURTHER OBSERVATIONS**

Conducting the focus groups led to the following general observations.

### **Public Education**

- At first, people are very skeptical of congestion pricing. They are generally not very aware of the concept. If asked to "vote" on it without more information, a majority are likely to say no.
- People respond differently to new information about congestion pricing. Some may feel overwhelmed by the complexity of the issues; some may react to specific concerns that affect them.
- People generally view congestion pricing in the context of current transportation patterns, overlooking ways in which other factors (e.g., transit service, land-use patterns) might simultaneously change.
- Most people who favor congestion pricing feel it would help reduce congestion. But many who do not favor congestion pricing also see its potential effectiveness. Their opposition is apparently based on other concerns.
- Complete and accurate information is critical. For example, few see the potential for congestion pricing to reduce total trips and vehicle miles traveled (VMT) but, rather, see it as a means to spread them out.
- Some models estimate that congestion pricing could reduce trips and VMT by over 15 percent, with an even greater reduction in auto emissions. This information is relevant for people.

### **Public Acceptance**

- Some people do not easily see the advantage of peak-period road pricing, which targets congestion, over a vehicle tax or a gas tax, which targets total trips and VMT. Most do accept the need to pay more to travel.
- People might accept congestion pricing more easily if it were part of a larger transportation package, for two apparent reasons:
  - 1) congestion pricing is viewed as a drastic move, and people want to know that it would not be implemented without consideration of other solutions, such as staggered work hours, more HOV lanes, telecommuting, and increased transit service
  - 2) people are skeptical about whether congestion pricing would be truly effective in reducing congestion, and they do not want to "put all their eggs in one basket."
- The common view is that congestion is caused primarily by work-related trips, and many want to place the burden for dealing with congestion on employers. While some participants were aware of steps taken by their

employers to meet Commute Trip Reduction Act (CTR) mandates, many were not. For some participants, whether employers would be willing and able to "take up the slack" (i.e., offer more flexible hours, carpooling, telecommuting) was a factor in their support for congestion pricing.

- People would accept congestion pricing more easily if charges were phased in.
- Successful implementation of congestion pricing would help people accept it.
- People want to see short-term benefits; for example, an immediate increase in bus service.
- Programs should reinforce the use of alternatives to SOVs, for example, by excluding HOV users from tolls.
- Unless a rail system were already available, people might keep looking to that as the answer to congestion.

### **FOCUS GROUP CONCLUSIONS**

Through the focus group process, the researchers reached the following conclusions:

- There was no clear trend of support for or opposition to congestion pricing after people learned more about it.
- The complexity of issues was confusing, and, in some cases, led to diminished support for congestion pricing.

Some issues arose more frequently and created more discussion than others, suggesting their importance to the participants. Below are conclusions regarding these issues:

- Geographical and income equity issues were seen as critical.
- Participants expressed a strong desire to see revenue from congestion pricing be invested in transportation improvements, especially in improvements that would provide an alternative to automobile driving.
- Benefits (e.g., better transit service) from congestion pricing should be implemented simultaneously with the charges.
- The technical aspects of congestion pricing caused concern, especially ways to deal with "spillover" from those who would use alternative routes to avoid road pricing or alternative parking in areas surrounding charge-for-parking locations.

## IV. EXECUTIVE INTERVIEWS

### **PURPOSE AND METHOD**

The purpose of the executive interviews was to gather input on the issues that might arise in implementing a congestion pricing system and on ways to address these issues.

We conducted interviews with the following people during June 1994.

<b><u>Name</u></b>	<b><u>Title</u></b>	<b><u>Organization</u></b>
Ray Corpuz	Manager	City of Tacoma
Aubrey Davis	Member	Wash. State Transportation Commission
Bruce Laing	Chair	King County Council
Maggi Fimia	Member	King County Council
William Gerberding	President	University of Washington
Charlie Howard	Manager	Transportation Planning Office Wash. State Department of Transportation
Gary Lawrence	Director	Seattle Planning Office
Terry Lewis	Director	U.S. Public Affairs, The Boeing Company
Karen Miller	Chair	Snohomish County Council
Renee Montgelas	Director	Office of Urban Mobility Wash. State Department of Transportation
Tom Stenger	Exec. Director	Wash. Transportation Policy-Institute
Alice Tawresey	Chair	Wash. State Transportation Commission
Bob White	Community Rail Services Manager	Regional Transit Authority

The interviews generally lasted between 45 and 60 minutes. Before the interviews, the subjects were sent a project description and a summary of issues raised in the focus groups and were advised of pricing strategies being studied by the Puget Sound Regional Council. They were asked how much they felt congestion was affecting the

region and whether they considered congestion pricing a way to address it. They were also asked to identify the congestion pricing implementation issues that appeared the most troublesome and ways in which these issues might be resolved. They were also asked how they thought congestion pricing revenues should be spent. In addition, they were prompted for ideas about how to design a public education effort and were asked to discuss the various pricing issues most relevant to their particular responsibilities.

### **EXECUTIVES' OPINIONS OF CONGESTION PRICING**

The interviews revealed the following trends in the subjects' opinions:

- Congestion is universally seen as a serious problem that impacts the movement of people, goods, and services.
- All interviewees were at least moderately in favor of congestion pricing.
- In general, the leaders did not view an increased gas tax or a VMT charge as a form of congestion pricing.
- The most support was shown for parking charges; road pricing was neither embraced nor rejected.
- Those interviewed generally had a good grasp of both congestion pricing concepts and issues; pricing is increasingly raised in transportation planning meetings.
- "Knowledge about" does not mean that leaders have formed opinions on ways to address congestion pricing issues; they are eager for more information (e.g., on kinds of projects) on which to base opinions.

### **EXECUTIVES' CONCERNS AND SUGGESTIONS**

#### **Concerns**

The interviewees expressed general support for the idea of congestion pricing, but they also raised specific concerns. Some of those issues include the following observations:

#### **Business Burden**

- The leaders' support for congestion pricing was contingent upon a system designed to address issues of business district competitiveness.

### **Effectiveness**

- There is some skepticism that congestion pricing would significantly reduce congestion.

### **Equity**

- Again, equity was a major concern. Their support for congestion pricing was contingent upon a system designed to at least partially solve income equity.

### **Government Control**

- Several executives wondered about the legal authority for congestion pricing.

### **Revenue**

- Most interviewees showed particular interest in the revenue potential.
- They preferred that revenues go toward system enhancements (e.g., transit, HOV, some roads) or toward reducing other taxes (e.g., the gas tax, assuming a road pricing system). Enhancements should provide alternatives to SOV driving.

### **Spillover**

- Their support was also contingent upon a system designed to mitigate spillover.

### **Technology**

- Several were concerned that the technology would have to be proved before a large-scale system were implemented.

### **Suggestions**

The executives had several important ideas about ways to address implementation issues and problems that were mentioned in the focus groups:

#### **Business Burden**

- The burden of congestion pricing should not be shouldered solely by businesses, which are involved with CTR implementation. However, business input and involvement are absolutely essential.

### **Demonstration Projects**

The executives volunteered the following ideas about demonstration projects that could be used to test congestion pricing. These ideas were expressed before Washington's public-private initiatives had been chosen.

- Test electronic readers in a "low-risk" setting (e.g., in a business parking lot).
- Rely on the pending public-private facility initiatives to prove that tolls will work in the West.
- Good potential locations for a demonstration project are the Tacoma Narrows Bridge and the Evergreen Floating Bridge.
- Consider a project that would charge different rates for work and non-work trips.

### **Equity**

- Provide travel alternatives to SOV.
- Charge graduated tolls.

### **Public Acceptance**

One of the topics of particular concern to the opinion leaders was gaining acceptance for congestion pricing through public education and other means. They made the following observations and suggestions:

- Congestion is not perceived as "that bad" by much of the public—this perception may detract from support for congestion pricing.
- Above all, involve citizen groups early in the planning process; bring them along, do not push them.
- Agree on the thresholds (e.g., residential density, average vehicle speeds) that would trigger the implementation of congestion pricing.
- Benefits (e.g., immediate increase in transit) would have to be part of the package.
- Find out who supports congestion pricing, by income level, by commute type, by residential location.
- Eastern Washington legislators would be more likely to support congestion pricing if they viewed it as a way to ease the delivery of goods.



### **Public Education**

- Adequately fund the public education effort.
- Educate policy-makers first; they will need answers to the public's questions and concerns.
- Explain the subsidies built into the current system and the pending lack of funds to support even the current transportation system.
- Be "boring but believable;" make sure facts are fairly presented.
- Be clear about the goal—is it to reduce congestion or reduce SOV use?

### **Regional Transit**

- Leaders were concerned that there is no regional consensus about transit service. They noted, for example, that some regional planners see congestion pricing as a way to avoid a transit investment, whereas others see it encouraging transit.
- One leader suggested that transit is simply not practical in some outlying areas.

### **Spillover**

- Involve neighborhood groups in designing the congestion pricing system.
- Land use should encourage centralized employment so transit service is practical.

### **Technology**

- Work out the bugs in a demonstration project. If congestion pricing were implemented full-scale and the technology failed, the result would be a public relations disaster.

## **EXECUTIVE INTERVIEW CONCLUSIONS**

Through the executive interviews, the researchers reached the following conclusions:

- "Opinion leaders" are generally well-informed about congestion pricing and the related issues.
- The importance of education for the public, as well as for opinion leaders and elected officials, cannot be overstated.

Some topics arose more frequently and created more discussion than others, suggesting their importance to the executives. Below are conclusions regarding these topics:

- Applications would have to be region-wide to avoid unequal impacts, especially in central business districts.
- Equity (income and geographic) and spillover issues would have to be substantively addressed.
- The uses of revenues would be critical to public acceptance.
- The public may not view congestion as bad enough to warrant major changes.
- Involvement by the public in planning the system would help with acceptance.

## **V. REVIEW FORUMS**

### **PURPOSE AND METHOD**

The project objectives included the development and testing of "two or three promising approaches for explaining the concept of congestion pricing and for presenting its advantages and disadvantages" in comparison with other revenue alternatives. During the focus groups, participants had suggested that it was difficult to evaluate congestion pricing without having specific proposals to respond to. So in addition to the public education approaches, we developed three strategy packages for presenting congestion pricing to the public. Thus the primary purpose of the review forums was to evaluate some specific, preliminary proposals, the three public education approaches and three strategy packages.

### **Education Approaches**

The intent of the public education approaches was to inform the public about the issues surrounding congestion and about ways that congestion pricing might address them. We believed the educational approaches should explain congestion pricing clearly and consistently, in a way that would leave the public well enough informed to make a decision about trying congestion pricing. We also thought they should only present programs that would have a high probability of being effective and being implemented.

Since it was unlikely that any "pure" approach would address all the issues surrounding congestion pricing, three approaches were developed to emphasize congestion pricing as a way to

- (1) change travel choices through economic incentives
- (2) fund the transportation system
- (3) charge for the full cost of trips.

The travel choice approach addressed congestion but carried a strong tone of "social engineering" and raised a number of equity issues. The funding approach suggested that

The travel choice approach addressed congestion but carried a strong tone of "social engineering" and raised a number of equity issues. The funding approach suggested that users should pay for roads and most clearly identified where congestion pricing revenues would go. However, some participants suggested that this was a tax on roads already paid for, while others were concerned that it did not hold government accountable. The full cost approach aimed to educate the public to help them make trip decisions. While this approach linked travel to direct and indirect costs, it suffered from the support of figures that were hard to substantiate and an attitude that these were "somebody else's" costs. A combined approach would fully describe the problems of congestion and current funding mechanisms, as well as how a congestion pricing system would operate, how it would address both current problems and those it would create, and how the revenues would be used.

#### **Congestion Pricing Strategy Packages**

The three strategy packages developed involved an increased gas tax, parking charges, road tolls, and an area-wide ring system. Each strategy package totaled \$5.00 per day, \$1.00 of which was gas tax. Gas tax is not seen as a congestion-reducing measure, but it has the advantage of being a large, dependable source of revenue. Across-the-board parking charges do not encourage short commutes and could strangle downtowns. However, people are used to parking charges and collection mechanisms are largely in place. Road tolls, in conjunction with parking charges and gas tax, could provide a balanced package that would ensure that most everyone participated to some degree in funding the system.

Strategy packages were not part of the original research proposal, and less thought went into their development than into the public education approaches. Any time numbers were presented, forum participants were cautioned that the figures used were for discussion purposes only, and it was necessary to both present support for them and to qualify them.

## **Methods**

The three review forums were held in the following locations on the dates indicated:

King County Administration Building	October 25, 1994
The Seattle Times	October 26, 1994
Bellevue City Hall	October 27, 1994

The review forums were co-facilitated by the report authors. Twenty-nine people (groups of seven, nine, and 13), all of whom had attended a previous focus group, participated. The researchers drew from the original focus groups so that they could build on material that had already been presented. Before the meeting, an updated project summary and a summary of the first five focus groups were distributed. Handouts describing the three public education approaches and the three strategy packages were given out at the session.

Each forum lasted about 90 minutes. Ten minutes were spent updating participants and answering questions; 10 to 15 minutes were used to present the three public education approaches; about 30 minutes were needed to gather feedback on these approaches; and the last 20 minutes were spent presenting the strategy packages.

## **REVIEW OF PUBLIC EDUCATION APPROACHES**

The literature search suggested that whether the public accepts or rejects congestion pricing (or any demand management tool) will rest largely on the perceptions that (1) congestion is a problem that needs to be addressed, (2) congestion pricing is an effective way to help solve the problem, and (3) its indirect effects on various segments of the population (e.g., downtown centers, low-income groups, adjacent neighborhoods) are neither onerous nor beyond satisfactory mitigation.

A public education approach should be clear, straightforward, and address doubts and concerns about effectiveness and equity. Public education approaches should also

assist in stimulating a broad and substantive debate of the issues. At minimum, public education approaches should (1) offer a rationale for using congestion pricing, (2) identify anticipated negative public reaction to congestion pricing, and (3) present arguments, if any, to respond to negative reaction.

### **Criteria for Public Education Approaches**

The researchers determined that a public education approach (and the program it seeks to explain) should be

- Workable—have reasonable expectations for implementation
- Understandable—clear regarding the type of congestion pricing program that is being suggested
- Relevant—tie the need for congestion pricing to the effects of the proposal
- Complete but Concise—not so technically obtuse that simple summaries are hard to extract
- Acceptable—innovative but not radical enough to raise deep-seated objections
- Comprehensive and Instructive—raise the public's level of awareness of the issues, answer how congestion pricing will seek to address these issues, and explain how it is designed to mitigate unwanted effects.

On the basis of these principles and approaches uncovered in the literature search, three public education approaches were developed for presentation to the review forums.

### **Approach Descriptions**

#### **Approach #1 - Emphasis on Changing Travel Choices**

This approach is based on a "classical" explanation of congestion pricing, i.e., using economic incentives to shape behavior. It emphasizes that congestion is a serious problem, it is getting worse, and congestion pricing can address it.

Participants judged this approach to be the strongest. However, discussions still revealed the potential negative public reactions listed below. Possible ways to deal with those reactions are also listed.

Negative Reactions	Possible Responses
Congestion pricing smacks of "big brother," behavior modification, and social engineering. People will say, "This is America, and we should be free to make our own choices."	In response, the objectives and reasons for subjecting ourselves to this must be very clear.
Low income drivers will be adversely affected	Some options include giving credits for work trips or "necessary" trips to low-income drivers or providing high- and low-income jobs and housing in all areas.
This approach does not specify where the money will go.	Combining approaches #1 and #2 would emphasize how congestion pricing would lead to more and better alternatives to SOV driving.
This approach does not differentiate between work (i.e., "necessary") and non-work trips.	One response would be to find a way to charge differently for non-work trips.
We have not tried everything else yet, so why should we try congestion pricing before we do?	Congestion pricing could co-exist with and support other programs such as a rail system and CTR. Congestion pricing could also be implemented in installments so the "shock" of a new system would be minimized.

### **Approach #2 - Emphasis on Raising Revenues.**

This approach highlights the projected gap between the costs to maintain the current transportation network and anticipated available funding. It frames congestion pricing as a way to charge system users to pay for improvements to the system.

The review forums revealed the following potential negative public reactions and possible ways to deal with those reactions:

Negative Reactions	Possible Responses
Enhancements benefit more than just the immediate users who pay for them (e.g., movement of goods benefits everyone).	We could continue to at least partially fund the transportation system through general fund allocations and emphasize how costs are ultimately passed on to consumers.
This is a politician's way of justifying more taxes.	Combining approaches #1 and #2 would emphasize how congestion pricing would lead to more and better alternatives to SOV driving and not just raise taxes for no return.
Some (i.e., wealthy people) will pay congestion pricing just to get "other people" off the road (so there is more space for them).	User fees are potentially a more equitable way to charge for services. The transportation system is currently inequitable. Congestion pricing is a way to reduce some of those subsidies. There will always be inequity—it is not reasonable to expect to eliminate it.
We have already paid for the roads once.	The cost of building roads does not cover the costs of ongoing maintenance.
The reason for the gap is government inefficiency. If we give the government more money, it will just waste it.	Clearly present the numbers; explain present and projected future costs; ask the public what they perceive as needs.
This approach does not specifically address the goal of reducing congestion.	The need for more facilities is based on peak-period use. Thus any method to reduce peak use will affect congestion.

### **Approach #3 - Emphasis on Charging for the Full Cost of Trips**

This approach suggests that drivers do not currently have enough information to make informed decisions about their trips. It aims to factor in social and environmental costs in reaching the "correct" charge for congestion pricing and begins to make links among travel, pollution, congestion, and the need for roads.



Participants judged this approach to be the least effective. Discussions revealed the following potential negative public reactions and possible ways to deal with those reactions:

Negative Reactions	Possible Responses
The values of many impacts are hard to determine or agree upon. Many people will not "buy into" this idea (it is too academic).	Clearly state the assumptions used in assessing costs, and get the facts straight. Do not overstate the accuracy of estimates.
"The cost of my commute is what I pay for gas."	Itemize the costs. Make the case for a stronger connection between personal (e.g., health impacts) and social costs.
This is what it costs "somebody else," e.g., "I drive a Volkswagen so my environmental costs are below average."	Keep the debate at the macro level, admitting that averages do not account for each person's use. Emphasize that unequal use is true of all public services.

### **A Proposed Public Education Strategy**

While the review forum participants rated the first approach as the strongest and the third as the weakest, no one approach, used alone, provided all the answers to the broad range of issues raised. What is needed, then, is a blend of approaches to capture the most salient and supportable arguments. A broad-based public education strategy would accomplish the following objectives:

1. Fully describe the problems and effects of both worsening congestion and future funding constraints.
2. Explain how the current transportation system is funded and identify the total impacts of travel.
3. Explain how the congestion pricing system would operate and how it would reduce congestion. In particular, delineate where to implement congestion pricing, the timing of that implementation, and the anticipated effects. These projections would serve as benchmarks against which to measure future effectiveness of the system
4. Outline a comprehensive plan for engaging the public and communicating the message.

To implement the fourth component would require a coordinated, multi-agency effort. Resources to staff this effort would be dedicated for a time sufficiently long to reach nearly all citizens in the region. The emphasis should be on education, not promotion. An advisory ballot issue might be an effective way to stimulate debate and create a forum in which to present the issues.

## **REVIEW OF STRATEGY PACKAGES**

Focus group participants suggested that it would be easier to understand congestion pricing and its effects if they had specific programs to react to. For discussion purposes, three strategy packages were developed, each totaling \$5.00 of charges per day for an average 20-mile commute. The three strategies are as follows:

1. \$4.00 charge for area pricing (i.e., a ring)  
\$1.00 added to gas tax
2. \$4.00 added to parking  
\$1.00 added to gas tax
3. \$2.00 for road tolls;  
\$2.00 added to parking  
\$1.00 added to gas tax

Note that a gas tax, a component of all three packages, would be a tough sell. A gas tax appears to be a punishment rather than an incentive to not to drive an SOV. It also can not be justified as a congestion-reducing measure. It would have to be phased in to avoid a shock. To maintain support, improvements in alternatives would have to be obvious throughout the phase-in period. Participants expressed concerns about how broad based the tax would be (i.e., in Seattle, King County, the region, the entire state?). There are also questions about its legality.

### **Area Pricing in Strategy Package #1 (\$4 area pricing; \$1 gas tax)**

Review forum participants suggested that a ring might not cover suburb-to-suburb trips, which are an increasingly large portion of traffic. A ring could also strangle urban areas. Although all drivers would be contributing to regional pollution, only drivers who entered the ringed areas would pay (except for the gas tax). This concept

could only work if all populated areas were surrounded by many small rings, which would create a very intricate system.

#### **Parking Charges in Strategy Package #2 (\$4 parking; \$1 gas tax)**

The primary problem with a parking tax is that there is not a clear link between parking and congestion or environmental impacts. Other problems that forum participants mentioned are that high parking charges apply as much to nearby employees as to long-distance commuters, sending a confusing message. Parking charges clearly affect shopping patterns, and downtown areas could be hurt by this scheme. However, if it were done regionally, downtowns might not be hurt. Advantages are that a structure is already set up to collect parking fees, and in paying for parking, people can actually see what they receive.

#### **Strategy Package #3 (\$2 road tolls; \$2 parking; \$1 gas tax)**

This is the most balanced of the packages. It would spread the burden. Furthermore, although people living close to work would pay the same parking charges as others, they would pay less in gas taxes and road tolls, allowing them to benefit from living near their work sites. The drawback to this plan is that each element would affect more drivers, making support potentially more difficult to obtain.

#### **Use of Hypothetical Strategy Packages**

The review forum process indicated that tangible, "what if" packages are useful in presenting congestion pricing. Review forum participants were quick to compute how these packages would affect them personally, and this might be expected of the general public as well. By computing these costs, citizens would be able to perform a crude cost benefit analysis, including reduced congestion in the benefits. Engaged in this manner, the public might offer more specific implementation concerns than they a general discussion would draw. However, attaching numbers to concepts should not be done casually, as some people would accept these figures as facts. This would require planners

to do sufficiently detailed modeling to arrive at figures that would both raise the desired revenues and have the desired effects on congestion.

### **REVIEW FORUM CONCLUSIONS**

The review forum process led to the following conclusions:

- No single public education emphasis or approach would be sufficient to explain congestion/transportation pricing.
- Whenever numbers are presented, they must be believable and supportable.

Regarding the educational approaches, participants indicated that the travel choice approach was the strongest, seeming to draw the clearest connection between the problem (congestion) and a pricing solution, whereas the full cost approach was the least effective and the most difficult to defend.

One of the most important outcomes of the strategy package review was that participants criticized parking charges for not encouraging short commutes and for potentially placing central business districts at a competitive disadvantage. Review forum participants began to see how parking policy impacts congestion, but this connection was not inherently obvious.

## **VI. QUANTITATIVE RESEARCH FOR PHASE II**

The qualitative research done in Phase 1 set the stage for quantitative analysis that should be conducted in Phase 2. Two types of surveys are anticipated: a telephone public opinion survey and group surveys

### **TELEPHONE PUBLIC OPINION SURVEY**

The telephone public opinion survey would be a 15- to 20-minute interview, administered to 1,000 to 2,000 randomly selected participants in the Puget Sound region to gauge understanding and impressions of pricing theory and issues. The objectives of the survey would be to establish the demographic profile of participants, assess participants' awareness and understanding of congestion/transportation pricing, gauge whether participants were in favor of a congestion pricing system in the Puget Sound region, determine which issues surrounding congestion pricing were most troublesome to respondents, and find out how they thought revenues should be used.

### **GROUP SURVEYS**

The group surveys would be administered in 75- to 90-minute sessions at various sites around the region. They would involve eight to 10 groups of 30 to 60 randomly selected participants each (at least 400 people). Pre- and post-session written questionnaires would be administered (number coded for matching, i.e., with no name identification), to gauge understanding and impressions of pricing theory and issues, as well as of public education emphases and proposed combinations of strategies.

The objectives of these surveys would be as follows:

- to establish the demographic profile of participants
- to assess participants' initial awareness and understanding of congestion/transportation pricing, as well as their initial level of support for a congestion pricing system in the Puget Sound region

- to explain to participants the rationale behind congestion/transportation pricing, the issues that the public and policy makers had raised thus far, and ways those issues might be addressed
- to present several emphases for explaining congestion/transportation pricing to the public and to field questions; to measure support for each emphasis by both a hand count at the end of the presentation and a question on the post-session survey
- to present two or three specific proposed strategy packages, including projected effects and to field questions; to measure support for each emphasis by both a hand count at the end of the presentation and a question on the post-session survey
- to gauge how participants' support for congestion/transportation pricing in the region or how their views on related issues might have changed with more information
- to determine how participants feel revenues should be used.

## **VII. CONCLUSIONS AND RECOMMENDATIONS**

Nearly all participants in the study agreed that congestion in the Puget Sound region is bad and getting worse, although most people said they were personally not unacceptably impacted. There was also widespread agreement that we can not "build our way out of congestion." Some people currently avoid congestion by taking alternative routes, shifting their hours of commute, or changing modes. Others suspected that they have progressively adapted to present levels of congestion and do not notice the inconvenience. But traffic trends were troubling to most participants, and this concern about the future appears to be a prime motivating factor for looking at pricing alternatives.

A small percentage of focus group participants felt they understood congestion pricing and the theory behind it. We observed an increase in awareness of congestion pricing as the study progressed, possibly because of media coverage of the "New Partners: Public-Private Initiatives in Transportation Program." However, participants generally viewed congestion pricing in terms of the context of today's transportation situation, and it may be challenging for the general public to make long-term link between congestion pricing, mode shifts, and changes in land use.

### **FOCUS GROUPS**

Through the focus group process, we reached the following conclusions:

- There is no clear trend of support for or opposition to congestion pricing after people learn more about it.
- The complexity of issues is confusing, and, in some cases, may lead to diminished support for congestion pricing.
- Geographical and income equity issues are critical.
- People would want revenue from congestion pricing to be invested in transportation improvements, especially in improvements that would provide an alternative to automobile driving.

- Benefits (e.g., better transit service) from congestion pricing should be implemented simultaneously with the charges.
- The technical aspects of congestion pricing may cause concern, especially ways to deal with "spillover" from those who would use alternative routes to avoid road pricing or alternative parking in areas surrounding charge-for-parking locations.

## **EXECUTIVE INTERVIEWS**

Specific conclusions reached from the executive interviews are as follows:

- "Opinion leaders" are generally well-informed about congestion pricing and the related issues.
- The importance of education for the public, as well as for opinion leaders and elected officials, cannot be overstated.
- Applications would have to be region-wide to avoid unequal impacts, especially in central business districts.
- Equity (income and geographic) and spillover issues would have to be substantively addressed.
- The uses of revenues would be critical to public acceptance.
- The public may not view congestion as bad enough to warrant major changes.
- Involvement by the public in planning the system would help with acceptance.

## **REVIEW FORUMS**

Specific conclusions reached from the review forums include the following:

- No single public education emphasis or approach will be sufficient to explain congestion/transportation pricing.
- Whenever numbers are presented, they must be believable and supportable.
- Of the three public education approaches, the travel choice approach may draw the clearest connection between the problem of congestion and a pricing solution, whereas the full cost approach may be the most difficult to defend.
- Parking charges may be criticized for not encouraging short commutes and for potentially placing central business districts at a competitive disadvantage. The connection between how parking policy and congestion is not inherently obvious.



## **SUMMARY CONCLUSIONS**

The many interviews and focus groups we conducted suggested that public opinion about tolls and congestion pricing cannot be neatly packaged and predicted. Timing is critical, as is the context in which information is presented. Given the participants' emphasis and our own observations, we believe that the following are the most important conclusions about public opinion from the study:

1. Pricing programs must ensure a reasonable level of mobility by providing good alternatives to SOVs.
2. Pricing must be applied region-wide if it is to be effective and to have any chance of addressing geographic equity issues.
3. How the revenues are used will be critical to public acceptance.
4. There must be well considered ways to deal with traffic and parking spillover.
5. Income equity issues must be addressed.
6. Members of the public must believe that transportation pricing will reduce congestion if they are to support it.
7. The public must have a high level of confidence in the technology.

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